

## AMENDMENTS TO THE CLAIMS

Cancel claims 16 and 45 without prejudice, and amend the claims as shown below.

1. **(Canceled)**
2. **(Currently Amended)** The method artificial tissue of claim 23 further comprising epithelial cells from the same species as the connective tissue cells and the endothelial cells.
3. **(Original)** The method artificial tissue of claim 2 wherein the epithelial cells form a multilayered epithelium.
4. **(Currently Amended)** The method artificial tissue of claims 2 or 23 wherein the cells are mammalian cells.
5. **(Currently Amended)** The method artificial tissue of claim 4 wherein the mammal is selected from the group consisting of primate, mouse, pig, cow, cat, goat, rabbit, rat, guinea pig, hamster, horse, and sheep.
6. **(Currently Amended)** The method artificial tissue of claim 4 wherein the mammal is a human.
7. **(Canceled)**
8. **(Canceled)**
9. **(Currently Amended)** The method artificial tissue of claims 2 or 23 wherein the support matrix comprises collagen.
10. **(Currently Amended)** The method artificial tissue of claim 44 wherein the microvascular endothelial cells comprise primary human adult lung microvascular cells.
11. **(Currently Amended)** The method artificial tissue of claims 2 or 23 wherein the connective tissue cells comprise primary human adult dermal fibroblasts.
12. **(Original)** The method artificial tissue of claims 2 or 3 wherein the epithelial cells comprise primary human adult keratinocytes.
13. **(Currently Amended)** The method artificial tissue of claim 23, wherein the support matrix comprises collagen, the endothelial cells comprise primary human adult lung microvascular cells, and the connective tissue cells comprise primary human dermal fibroblasts.
14. **(Currently Amended)** The method artificial tissue of claim 13, wherein the artificial tissue additionally comprises primary human keratinocytes.

15. (Currently Amended) The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue produces one or more compounds selected from the group consisting of laminin, fibronectin, collagen I, collagen III, hyaluronic acid, VEGF 145, VEGF 121, bFGF, IL-8, Syndecan-1, CXCR-1, CXCR-2, a mannose-containing protein, an acetylglucosamine-containing protein, PECAM-1, alpha-SMA, MMP-2, a growth factor receptor, plasminogen activator, mSRA, and CD68.

16. (Canceled)

17. (Canceled)

18. (Currently Amended) The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue produces one or more periendothelial ~~periendothelial~~ cells.

19. (Currently Amended) The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue produces an extracellular matrix.

20. (Currently Amended) The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue is self-maintained.

21. (Canceled)

22. (Canceled)

23. (Currently Amended) A method of producing an ~~An~~ artificial tissue, said ~~produced by~~ a method comprising: mixing together a support matrix and connective tissue cells to form a support matrix-connective tissue mixture and forming an original ~~a~~ culture comprising two layers of support matrix-connective tissue mixture separated by a layer of endothelial cells, wherein said endothelial cells contact inner surfaces of the support matrix-connective tissue mixture layers, and wherein the cells are from the same species, whereby ~~said~~ original culture produces an artificial tissue comprising one or more microvessels ~~produced therein, wherein said one or more~~ ~~microvessels produce~~ and one or more mononuclear leukocytes.

24. (Canceled)

25. (Currently Amended) The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue is maintained in vitro.

26. (Currently Amended) The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue is a composition suitable for tissue grafting.

27-42. (Canceled)

43. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the support matrix comprises only natural components.

44. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the endothelial cells comprise microvascular endothelial cells.

45. **(Canceled)**

46. **(New)** The method of claims 2 or 23 wherein microvessels and mononuclear leukocytes are not present in the original culture, but are formed during culturing.

47. **(New)** An artificial tissue produced by the method of claim 23.

48. **(New)** An artificial tissue produced by the method of claim 46.